

LAC0001-CON**PATENT****IN THE CLAIMS:**

Please amend the claims as follows:

1. (Currently Amended) In a material harvesting system comprising a harvester, the

harvester comprising ~~an air~~ a delivery system, a module builder comprising:

a holding chamber in communication with a harvester ~~air~~ delivery system,

a wheeled frame adapted for towing behind a harvester;

a compaction chamber comprising:

at least two compaction side walls; and

a compaction surface oriented between and substantially perpendicular to the

compaction sidewalls, nominally vertical, and translatable in a

substantially horizontal direction between a leading edge of the

compaction chamber and a trailing edge of the compaction chamber at

various vertical and near-vertical orientations;

the compaction chamber coupled to the wheeled frame as to receive material from the

holding chamber through the chamber top with the compaction surface at the

leading edge of the compaction chamber;

compaction means attached to the wheeled frame, coupled to the compaction surface, and

operative to translate the compaction surface in a substantially horizontal

direction between the compaction chamber leading edge and the compaction

chamber trailing edge at various vertical and near-vertical orientations;

a forming chamber coupled to the wheeled frame, having a forming chamber leading

edge and a forming chamber trailing edge defined therein, the forming chamber

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leading edge substantially adjoining and aligned with the trailing edge of the compaction chamber, and

a forming chamber door assembly comprising:

a substantially vertical forming chamber door frame at least spanning the forming chamber trailing edge, coupled to the wheeled frame, and movable toward and away from the forming chamber trailing edge along the wheeled frame, and

~~two~~ at least one substantially vertical forming chamber ~~doors~~ door hingedly mounted on the forming chamber door frame and movable between open and closed states across the forming chamber trailing edge opening; and forming chamber door assembly translation means attached to the wheeled frame, coupled to the forming chamber door frame, and operative to translate the forming chamber door frame in a substantially horizontal direction toward and away from the forming chamber trailing edge.

2. (Original) The module builder of Claim 1, wherein:
the compaction chamber is coupled to the wheeled frame substantially over the pivot point of the harvester, and

the holding chamber is positioned substantially over the pivot point of the harvester.

3. (Original) The module builder of Claim 1, further comprising:
a nominally horizontal movable floor attached to the wheeled frame, extending from at least the trailing edge of the forming chamber to substantially the rear of the wheeled frame, and operative to move material on the movable floor at least in a

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direction away from the forming chamber trailing edge and drop the material off the module builder.

4. (Original) The module builder of Claim 3, wherein the movable floor is lowerable to the surface supporting the wheeled frame for off-loading modules.

5. (Original) The module builder of Claim 1, wherein the forming chamber cross section increases between the forming chamber leading edge and the forming chamber trailing edge.

6. (Currently Amended) The module builder of Claim 1, wherein the ~~doors~~ at least one door ~~are~~ is biased in a closing direction.

7. (Original) The module builder of Claim 1, wherein the compaction means are hydraulic.

8. (Currently Amended) A method for forming modules from un-harvested crops, the method comprising:

providing a harvesting system comprising a harvester and a module builder,

the harvester comprising ~~an air~~ a delivery system,

the module builder comprising:

a holding chamber in communication with a harvester ~~air~~ delivery system,

a wheeled frame adapted for towing behind a harvester;

a compaction chamber comprising:

at least two compaction side walls; and

a compaction surface oriented between and substantially perpendicular to

the compaction sidewalls, nominally vertical, and translatable in a

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substantially horizontal direction between a leading edge of the compaction chamber and a trailing edge of the compaction chamber at various vertical and near-vertical orientations;

the compaction chamber coupled to the wheeled frame as to receive material from the holding chamber through the chamber top with the compaction surface at the leading edge of the compaction chamber;

compaction means attached to the wheeled frame, coupled to the compaction surface, and operative to translate the compaction surface in a substantially horizontal direction between the compaction chamber leading edge and the compaction chamber trailing edge at various vertical and near-vertical orientations;

a forming chamber coupled to the wheeled frame, having a forming chamber leading edge and a forming chamber trailing edge defined therein, the forming chamber leading edge substantially adjoining and aligned with the trailing edge of the compaction chamber, and comprising:

a forming chamber door assembly comprising:

a substantially vertical forming chamber door frame at least spanning the forming chamber trailing edge, coupled to the wheeled frame, and movable toward and away from the forming chamber trailing edge along the wheeled frame, and

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~~two~~ at least one substantially vertical forming chamber ~~doors~~ door

~~hingedly~~ mounted on the forming chamber door frame and
movable between open and closed states across the forming
chamber trailing edge opening; and

forming chamber door assembly translation means attached to the wheeled
frame, coupled to the forming chamber door frame, and operative
to translate the forming chamber door frame in a substantially
horizontal direction toward and away from the forming chamber
trailing edge; and

in the harvester:

~~stripping~~ gathering crop from a plurality of plants;

entraining ~~stripped~~ gathered crop in the ~~air~~ delivery system;

in the module builder:

holding entrained crop in the holding chamber;

beginning with the compaction surface substantially parallel to the compaction

chamber leading edge, the door frame releasably secured substantially
against the trailing edge of the forming chamber, and the at least one ~~doors~~
door closed on the door frame, repeating the following steps until a
module of preset length is formed:

opening the holding chamber, thereby concurrently filling the compaction

chamber and the forming chamber with crop from the holding chamber;

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closing the holding chamber upon the fill-level in the compaction chamber
reaching a preset level;
orienting the compaction surface such that the top edge of the compaction surface
leans toward the rear of the wheeled frame;
translating the compaction surface horizontally through the compaction chamber
to the compaction chamber trailing edge, thereby compacting crop into the
forming chamber;
translating the compaction surface horizontally through the compaction chamber
substantially to the compaction chamber leading edge; and
orienting the compaction surface substantially parallel to the compaction chamber
leading edge;
when the horizontal force of formed ~~croton~~ crop exceeds the preset value,
releasing the door frame to move, by the horizontal force of compacted
and formed ~~croton~~ crop, horizontally toward the rear of the module
builder;
at a preset point, releasing the ~~doors~~ at least one door to open, retaining a bias
force of the ~~doors~~ at least one door against the sides of the module as the
module passes through the door frame;
upon forming a module of preset length, translating the compaction surface
through the forming chamber, thereby moving the formed module toward
the rear of the module builder.

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9. (Original) The method of Claim 8 wherein the steps in the module builder occur concurrent with the steps in the harvester.

10. (Currently Amended) A method for forming modules from harvested crops, the method comprising:

providing a module builder comprising:

a holding chamber in communication with a harvester,

a wheeled frame adapted for towing behind a harvester;

a compaction chamber comprising:

at least two compaction side walls; and

a compaction surface oriented between and substantially perpendicular to

the compaction sidewalls, nominally vertical, and translatable in a

substantially horizontal direction between a leading edge of the

compaction chamber and a trailing edge of the compaction

chamber at various vertical and near-vertical orientations;

the compaction chamber coupled to the wheeled frame as to receive material from

the holding chamber through the chamber top with the compaction surface

at the leading edge of the compaction chamber;

compaction means attached to the wheeled frame, coupled to the compaction

surface, and operative to translate the compaction surface in a

substantially horizontal direction between the compaction chamber

leading edge and the compaction chamber trailing edge at various vertical

and near-vertical orientations;

a forming chamber coupled to the wheeled frame, having a forming chamber leading edge and a forming chamber trailing edge defined therein, the forming chamber leading edge substantially adjoining and aligned with the trailing edge of the compaction chamber, and comprising:

a forming chamber door assembly comprising:

a substantially vertical forming chamber door frame at least spanning the forming chamber trailing edge, coupled to the wheeled frame, and movable toward and away from the forming chamber trailing edge along the wheeled frame; and

~~two~~ at least one substantially vertical forming chamber ~~doors~~ door ~~hingedly~~ mounted on the forming chamber door frame and movable between open and closed states across the forming chamber trailing edge opening; and

forming chamber door assembly translation means attached to the wheeled frame, coupled to the forming chamber door frame, and operative to translate the forming chamber door frame in a substantially horizontal direction toward and away from the forming chamber trailing edge; and

a nominally horizontal movable floor attached to the wheeled frame, extending from at least the trailing edge of the forming chamber to substantially the rear of the wheeled frame, and operative to move material on the movable floor at least in a direction away from the forming chamber trailing edge and drop the material off the module builder;

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holding harvested crop in the holding chamber;

beginning with the compaction surface substantially parallel to the compaction chamber leading edge, the door frame releasably secured substantially against the trailing edge of the forming chamber, and the ~~doors~~ at least one door closed on the door frame, repeating the following steps until a module of preset length is formed:

opening the holding chamber, thereby concurrently filling the compaction chamber and the forming chamber with crop from the holding chamber;

closing the holding chamber upon the fill-level in the compaction chamber reaching a preset level;

orienting the compaction surface such that the top edge of the compaction surface leans toward the rear of the wheeled frame;

translating the compaction surface horizontally through the compaction chamber to the compaction chamber trailing edge, thereby compacting crop into the forming chamber;

translating the compaction surface horizontally through the compaction chamber substantially to the compaction chamber leading edge; and

orienting the compaction surface substantially parallel to the compaction chamber leading edge;

when the horizontal force of formed ~~cotton~~ crop exceeds the preset value, releasing the door frame to move, by the horizontal force of compacted and formed ~~cotton~~ crop, horizontally toward the rear of the module builder;

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at a preset point, releasing the ~~doors~~ at least one door to open, retaining a bias force of the
~~doors~~ at least one door against the sides of the module as the module passes
through the door frame;
upon forming a module of preset length, translating the compaction surface through the
forming chamber, thereby moving the formed module toward the rear of the
module builder.